

ABSTRACT

With the present invention, an optical line termination prepares a database, in which passwords and service details are stored according to each subscriber, and upon detecting the connection of a new optical network unit in performing autonomous ranging, issues a control message that requests the newly connected optical network unit to provide a password and thereby acquires the password, and then searches the database based on the password to thereby specify a subscriber and the service details and performs bandwidth setting and connection setting based on the specified service details. Each optical network unit holds a password input by a subscriber and, upon receiving a control message that requests the password from the optical line termination, issues a response message that notifies the password. A plug-and-play function can thereby be realized by which autonomous ranging can be performed and the provision of services can be started immediately for optical network units purchased and installed by subscribers under an open terminal environment.